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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,489	11/14/2005	Andrew Samways	037141.55741US	8448
79888	7590	01/19/2010	EXAMINER	
Mann+Hummel GMBH Department VR-P Hindenburgstr. 45 Ludwigsburg, 71638 GERMANY			COOLEY, CHARLES E	
			ART UNIT	PAPER NUMBER
			1797	
			NOTIFICATION DATE	DELIVERY MODE
			01/19/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/556,489	<b>Applicant(s)</b> SAMWAYS ET AL.	
	<b>Examiner</b> Charles E. Cooley	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-8, 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 2, 14-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **FINAL OFFICE ACTION**

1. **This application remains assigned to Technology Center 1700, Art Unit 1797 and the following will apply for this application:**

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1797**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

### ***Election/Restriction Requirement***

2. Applicant's election without traverse of Group I in the reply filed on 6 MAR 2009 is acknowledged. Nonelected claims 9-13 have been cancelled.

### ***Priority***

3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). All of the CERTIFIED copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

### ***Specification***

4. The substitute abstract is approved.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2: the underlined subject matter added to claim 2 is worded in an awkward and unclear manner and appears to be missing text (such as --between-- after “circumferentially”). In line 2 of this same section, replace “saidf” with --said--.

Claim 2 is being treated on the merits to the extent it is understood.

***Claim Rejections - 35 USC § 103***

7. The terms used in this respect are given their broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art, in light of the written description in the specification, including the drawings, without reading into the claim any disclosed limitation or particular embodiment. See, e.g., *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989). The Examiner interprets claims as broadly as reasonable in view of the specification, but does not read

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limitations from the specification into a claim. *Elekta Instr. S.A.v.O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000).

8. To determine whether subject matter would have been obvious, "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved .... Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

*Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

The Supreme Court has noted:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

*KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740-41 (2007). "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." (Id. at 1742).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter

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sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**11. Claims 2 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/055207 A1 in view of Downey (US 3,235,174).**

WO 02/055207 discloses the recited subject matter substantially a claimed including a centrifuge with a rotor (at least in Fig. 2) comprising a walled contaminant separation and containment vessel 230 having a longitudinally extending rotation axis, an impervious outer side wall 134 extending about and along the rotation axis spaced radially therefrom and at least one end wall extending from the side wall towards the rotation axis, an outlet passage 142, leading externally of the vessel, disposed radially inwardly with respect to the outer side wall, said walls defining radially inwardly from the outer side wall an annular contaminant separation and containment zone 140 and the

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outlet passage defining the radial boundary of the zone, an inlet 250, arranged to receive liquid to be cleaned and convey it to the contaminant separation and containment zone at a rate less than liquid can be passed by the outlet passage, a mounting arrangement/hub 122 for mounting the rotor for rotation of the vessel about the longitudinal rotation axis, and a fluid motor impeller 172 disposed to receive a jet of drive fluid thereagainst and responsive to drive fluid impingement to rotate the rotor about said longitudinal rotation axis, said inlet further comprising a liquid inlet region, defined about and along the rotation axis by a divider wall 252 disposed radially between the outlet passage and the rotation axis, having a liquid inlet end, a transfer passage 264, spaced from the inlet end, permitting liquid flow between the inlet region and contaminant separation and containment zone; a collection face 258 of said divider wall facing inwardly towards the rotation axis; the fluid motor impeller comprises a plurality of motor impeller vanes 174 or 474 disposed at or adjacent the inlet end of the inlet, each upstanding with respect to said dividing wall collection face; the motor impeller vanes 474 extend about the rotation axis and along the divider wall from said inlet end towards said transfer passage in the same directional sense as the collection impeller vanes; the motor impeller vanes 474 each have a primary face facing in a direction towards the transfer passage and are arranged to receive drive fluid injected into the inlet region on said primary face and deflect spent fluid in a direction between said collection impeller vanes towards the transfer passage.

WO 02/055207 does not disclose the recited collection impeller with vanes extending along a helical path located at the inlet. The patent to Downey (US

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3,235,174) discloses a centrifuge having an inlet region with a collection impeller with vanes 79 extending along a helical path within the recited pitch angle range.

Substantially closed collection liquid ducts are defined circumferentially between a tubular sleeve 64 extending along the rotation axis, said adjacent collection impeller vanes 79, and a divider wall 65 collection face as seen in Figure 1. It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the centrifuge of WO '207 with a collection impeller with vanes extending along a helical path located at the inlet between a tubular sleeve and the divider wall collection face as taught by Downey '174 for the purpose of impelling the liquid in the inlet region (Downey '174 at col. 5, lines 25-41).

Furthermore, the product-by-process limitations (i.e., the manner in which the rotor is formed or molded – claim 16) do not impart patentability to the claims per MPEP 2113.

**12. Claims 19-20 are rejected under 35 USC 103(a) as being unpatentable over WO 02/055207 A1 in view of Bannister (US 2,311,606).**

WO 02/055207 discloses the recited subject matter substantially as claimed as noted above and further discloses a centrifugal separator comprising a housing 112 including a mounting arrangement 122 to support a rotor including a liquid separation and containment vessel for rotation about a rotation axis, a drainage 114 to direct liquid exiting the vessel away from the rotor, a fluid motor turbine including a drive fluid nozzle 176 operable to direct a stream of drive fluid to motor impeller vanes, and a vessel



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supply 118 operable to direct liquid to be cleaned to the rotor vessel; a liquid nozzle 176 operable to direct a free jet of said liquid to the inlet end of the inlet.

WO 02/055207 does not disclose the recited collection impeller with vanes extending along a helical path located at the inlet. The patent to Bannister in Figure 1 discloses a centrifuge having an inlet region with a collection impeller with vanes 24 extending along a helical path within the recited pitch angle range. The impeller vanes are secured circumferentially to a tubular sleeve 23 aligned with the rotation axis, wherein said impeller vanes 24 taper to decreased width and distance from said tubular sleeve as a function of distance from an end wall 26. It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the centrifuge of WO '207 with a collection impeller with tapered vanes extending along a helical path located at the inlet as taught by Bannister for the purpose of impelling and lifting the liquid in the inlet region (col. 2, lines 17-33).

### ***Allowable Subject Matter***

13. Claims 3-8 and 17-18 are allowed.

### ***Response to Amendment***

14. Applicant's arguments filed 17 DEC 2009 have been fully considered but they are not persuasive.

The centrifugal separator patent to Downey '174 is considered to teach and suggest the subject matter added to claim 2 as noted in section (11) above. Likewise, the previously cited centrifugal separator patent to Bannister is considered to teach and suggest the subject matter added to claim 19 as noted in section (12) above.

### ***Conclusion***

15. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION. ANY RESPONSE FILED AFTER THE MAILING DATE OF THIS FINAL REJECTION WILL BE SUBJECT TO THE PROVISIONS OF MPEP 714.12 AND 714.13.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1797 whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri.. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E. Cooley/

Charles E. Cooley  
Primary Examiner  
Art Unit 1797

14 January 2010